

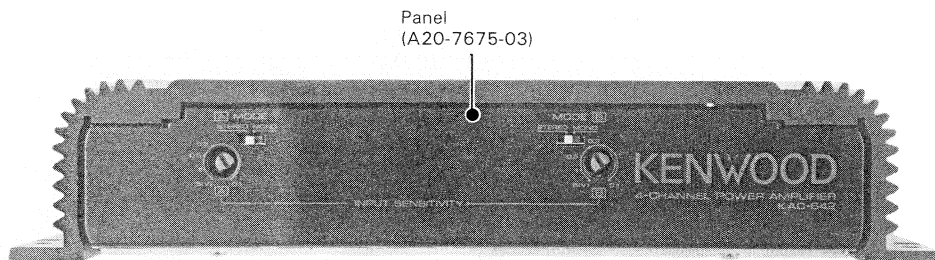
# KAC-642

## SERVICE MANUAL

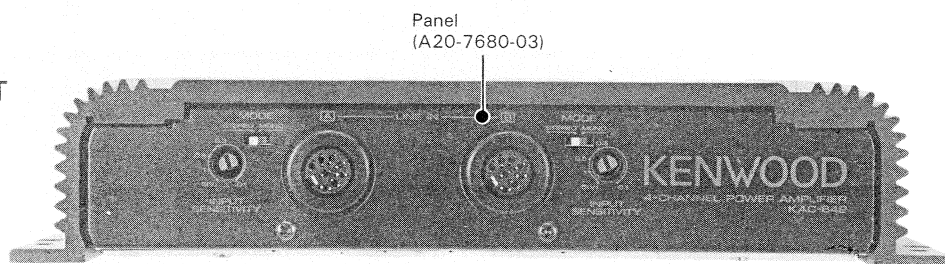
# KENWOOD

©1991-5 PRINTED IN JAPAN  
B51-6314-00(T) 3313

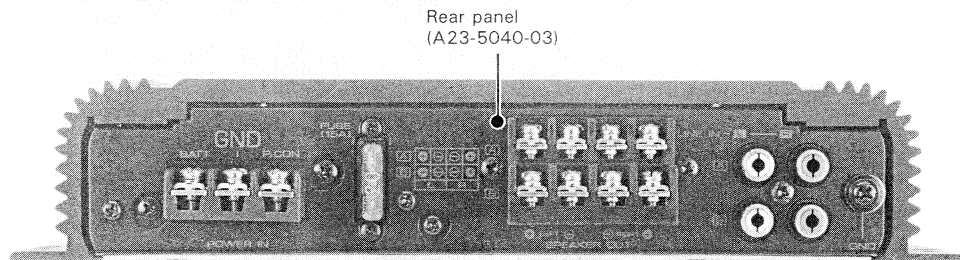
K TYPE FRONT



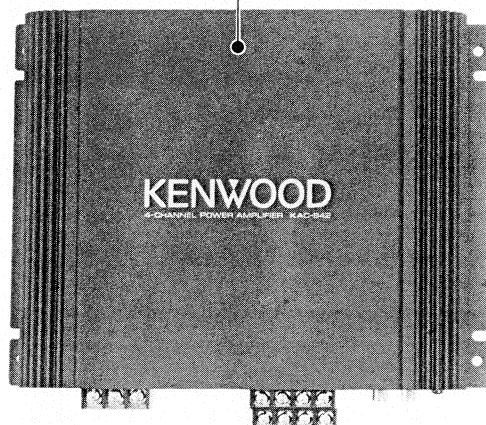
E, T TYPE FRONT



REAR



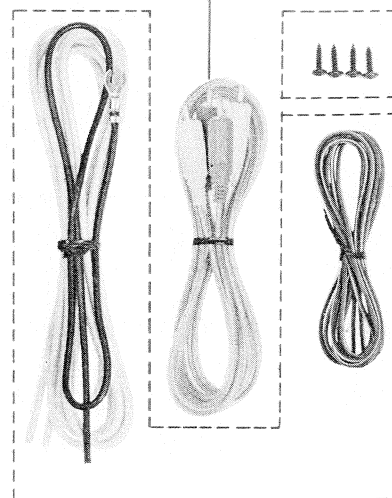
Heat sink  
(F01-1373-02)



Accessory (E, T type only)  
(W01-0701-05)



Audio cord (E, T type only)  
(E30-3883-05)

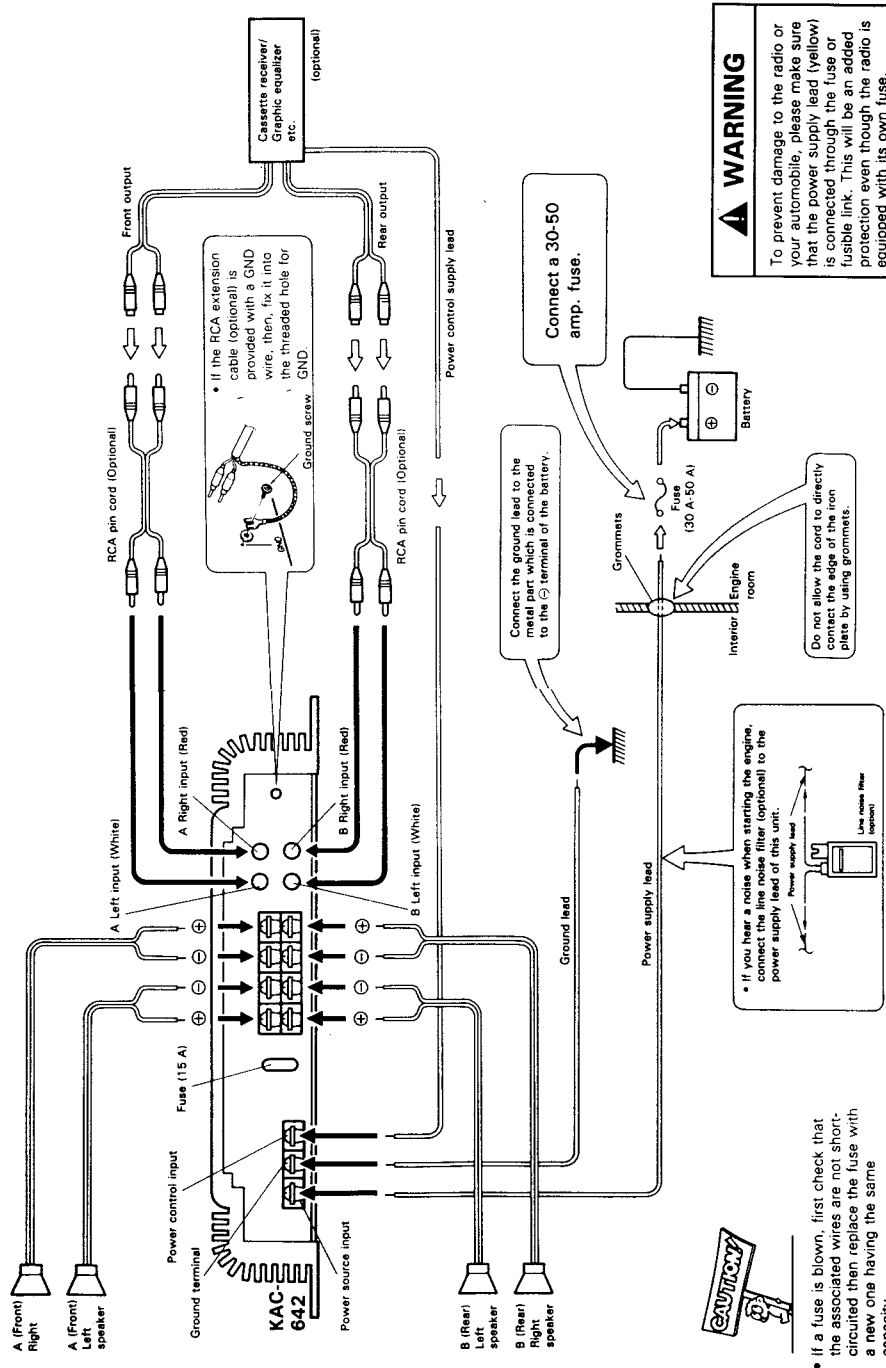


DC cord ass'y (E, T type only)  
(E30-3672-05)

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## CONNECTIONS



## CONNECTIONS

### ■ CONNECTION PROCEDURES

1. Before installation and wiring, remove the ( - ) terminal of the battery to prevent short-circuiting.
2. Connect the input and output cords of the system.
3. Connect the ground to the metal chassis of the car.
4. Connect the power supply lead.
5. Install the set and after confirming the installation and wirings are correct, connect the ( - ) terminal of the battery.

### ■ USE OF THE OPERATION PANEL ACCORDING TO SYSTEM TYPE

#### • Input sensitivity control

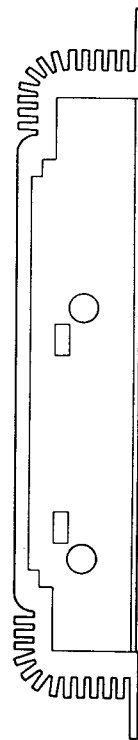
The input sensitivity control adjusts the input sensitivity within a range of 0.1 V to 5.0 V continuously, enabling expansion with various systems.

This unit has been set for 0.3 V.



★ The left input sensitivity controller is for A and right for B.

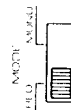
KENWOOD head unit preout level (MAX.)	Amplifier input sensitivity
300 mV	0.1 V
1 V	0.3 ~ 0.5 V



KAC-642

#### • Mode switch

When this switch is set to "MONO", the output of that channel becomes monaural and the output is doubled.



★ The left MODE switch is for A and right for B.

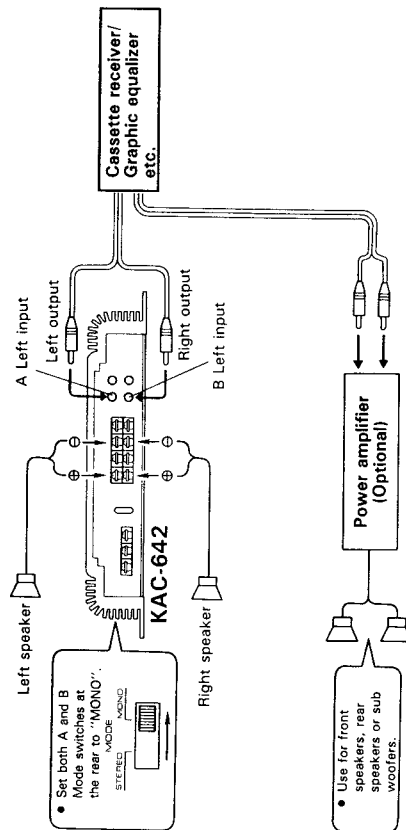
### ■ SYSTEM EXAMPLES

When the Mode switch is set to "MONO" the output of that channel becomes monaural and the output is doubled.

With this function, various system can be made.

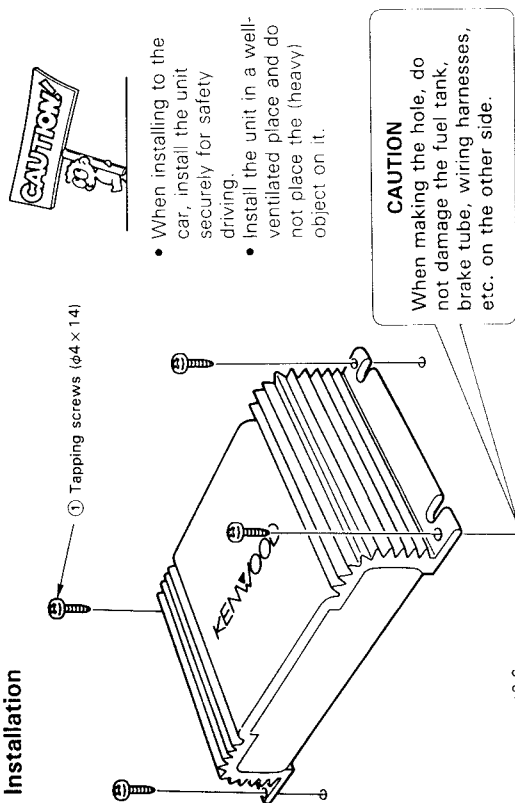
The examples are as follows. With these examples, both Mode switches should be set to "MONO".

**NOTE:** With this system, the LEFT side is for inputs.

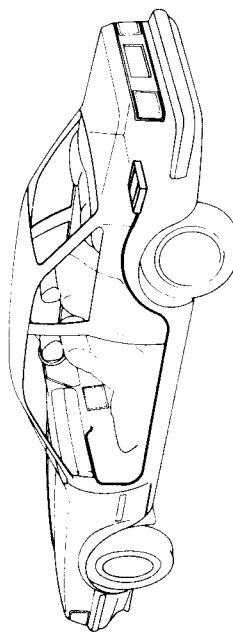


## INSTALLATION

### 1. Installation



### 2. Installation location



- Since the power amplifier has no parts which require operation, it can be installed at a position away from the driver's seat without any hindrances. As generally accepted positions for its installation, places such as inside the trunk, etc. can be considered.
- Use the extension cables. (Optional)

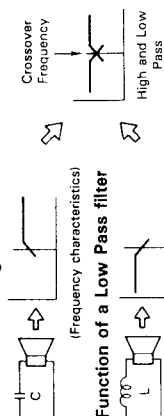
	0.5 m	1 m	2 m	4 m	6 m
RCA φ11.5	CA-5W	CA-15W	CA-25W	CA-45W	CA-65W
φ8	CA-3W	CA-13W	CA-23W	CA-43W	CA-63W

## CONSTANT TABLE OF NETWORK FOR TRI MODE

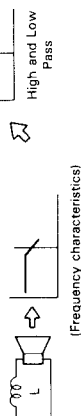
You can construct a multiple speaker system through the use of passive crossovers (coils and capacitors) as shown below: (if the coils and capacitors are not available in the values listed, coils and capacitors with similar or close values can be used without affecting the performance in practical use.)

### ■ 6 dB/Octave for High and Low pass Filter

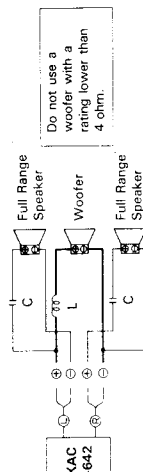
- Functions of a High Pass filter



- Function of a Low Pass filter



- 6 dB/Octave w/Sub Woofer and Full Range Speakers



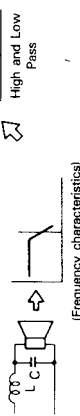
When using a 2 ohm speaker, use half the value of the coil for low pass and use twice the value of the capacitor for high pass. Example: 30 Hz L = 10.6 mH, C = 2660  $\mu$ F  
When using a 8 ohm speaker, use twice the value of the coil for low pass and use half the value of the capacitor for high pass. Example: 30 Hz L = 42.4 mH, C = 665  $\mu$ F

### ■ 12 dB/Octave for High and Low pass Filter

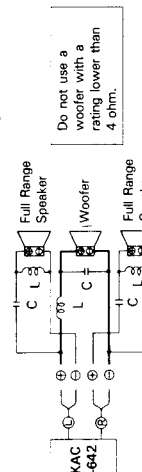
- Functions of a High Pass filter



- Function of a Low Pass filter



- 12 dB/Octave w/Sub Woofer and Full Range Speakers



When using a 2 ohm speaker, use half the value of the coil for low pass and use twice the value of the capacitor for high pass. Example: 30 Hz L = 14.9 mH, C = 1900  $\mu$ F  
When using a 8 ohm speaker, use twice the value of the coil for low pass and use half the value of the capacitor for high pass. Example: 30 Hz L = 59.4 mH, C = 475  $\mu$ F

Table of content for 6 dB (4 Ohm)

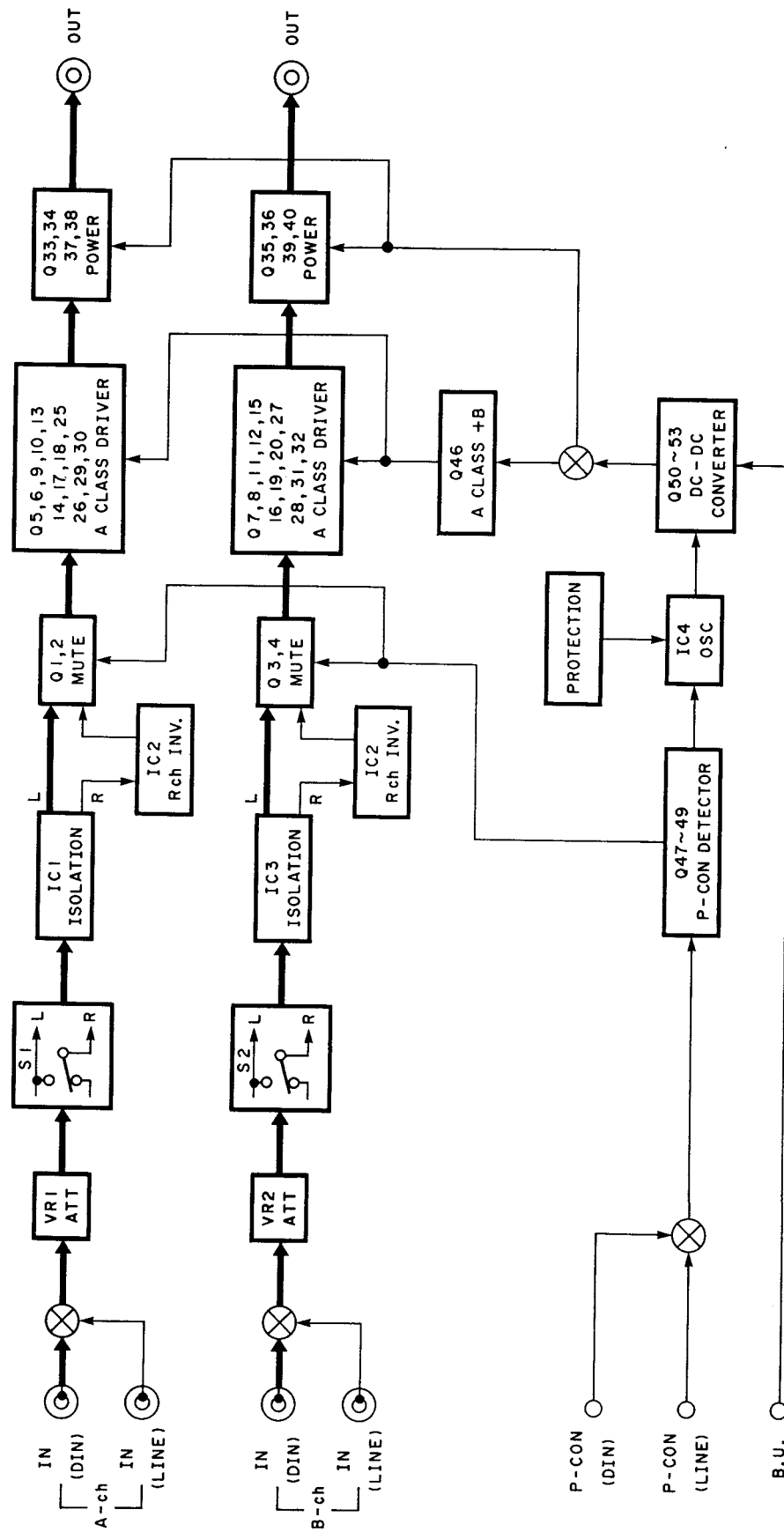
Cross-over Frequency	L (Coil)	C (Capacitor)
30Hz	21.2mH	1330 $\mu$ F
50Hz	12.7mH	800 $\mu$ F
80Hz	8.0mH	500 $\mu$ F
100Hz	6.4mH	400 $\mu$ F
150Hz	4.2mH	270 $\mu$ F
200Hz	3.2mH	200 $\mu$ F
260Hz	2.4mH	150 $\mu$ F
400Hz	1.6mH	100 $\mu$ F
600Hz	1.1mH	70 $\mu$ F
800Hz	0.8mH	50 $\mu$ F

Table of content for 12 dB (4 Ohm)

Cross-over Frequency	L (Coil)	C (Capacitor)
30Hz	29.7mH	950 $\mu$ F
50Hz	17.8mH	570 $\mu$ F
80Hz	11.1mH	350 $\mu$ F
100Hz	8.9mH	280 $\mu$ F
150Hz	5.9mH	190 $\mu$ F
200Hz	4.5mH	140 $\mu$ F
260Hz	3.4mH	110 $\mu$ F
400Hz	2.2mH	70 $\mu$ F
600Hz	1.5mH	48 $\mu$ F
800Hz	1.1mH	35 $\mu$ F



## BLOCK DIAGRAM



# AC-642

## CIRCUIT DESCRIPTION

### AUDIO UNIT (X09-340X-XX)

Ref. No.	Use/Function	Operation/Condition/Compatibility
IC1, 3	G-isolation	
IC2	R CH inversion stage	General-purpose SIP opamp.
D1-8	Latch up prevention	General-purpose diodes.
D13, 14, 15	Constant-voltage Zener diodes	
D16	P-CON OFF shock noise	
Q21 ~ 24	Idle current	
Q25 ~ 32	Driver	
Q33 ~ 40	Output stage	
Q41 ~ 44	Current protection	Detection transistors.
D9 ~ 12	Current protection	Reverse bias shaping.
D28	LED	
D25	P-CON sensitivity	
D24	Inverse connection protection	
D27	- B current	
Q50 ~ 53	DC-DC converter	
Q1 ~ 4	Muting transistors	

### SUB-CIRCUIT UNIT (X13-6850-10)

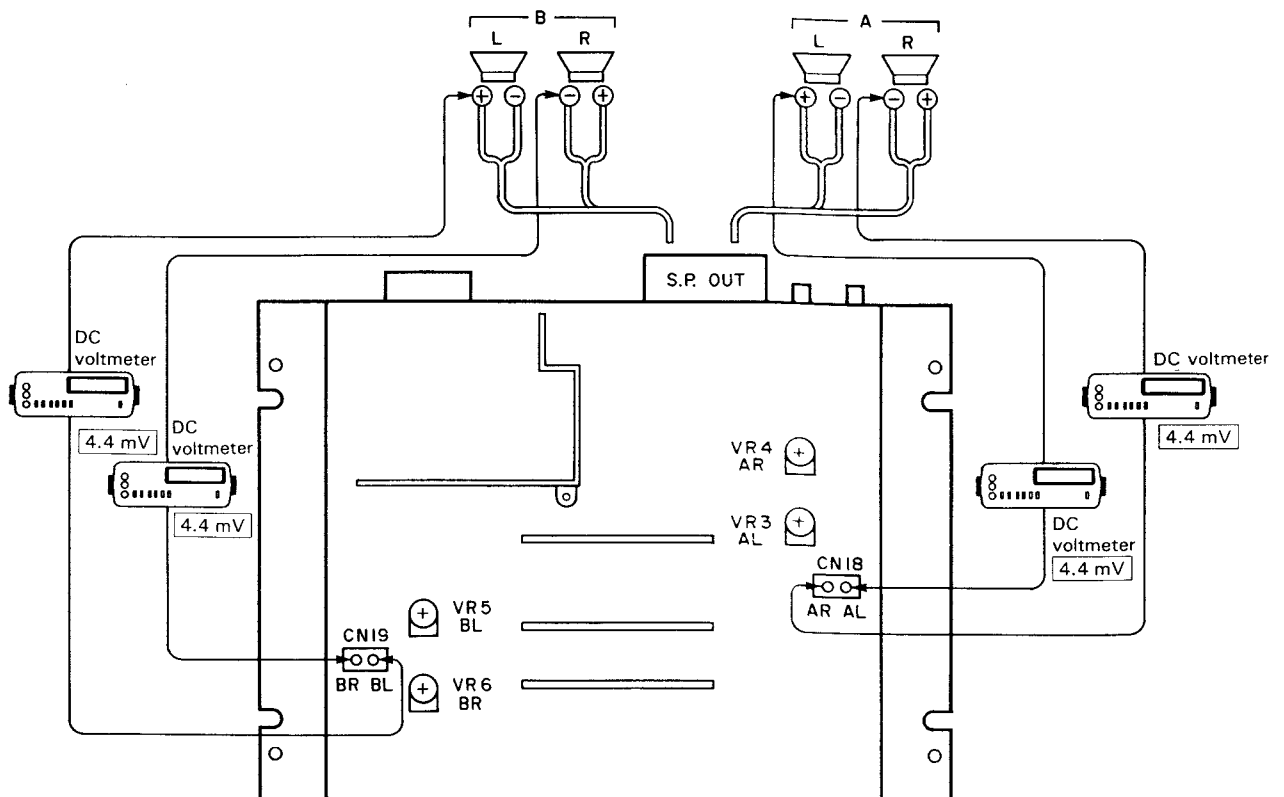
Ref. No.	Use/Function	Operation/Condition/Compatibility
Q5 ~ 20	Power amp differentiation stage	
Q45	Muting driver	
Q46	Class A slow starter	
Q47	P-CON OFF, quick release	
Q48, 49	+ B SW	
D28	Muting power supply	
D17 ~ 21	Logic circuit	
IC4	DC-DC OSC, controller	
D22	Reverse current stopping	

## ADJUSTMENT

## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Connect a cassette deck							
1	IDLE CURRENT	—	Connect a DC voltmeter between A CN18(L, R) B CN19(L, R) and SP-OUT(L+, R-)	volume: 0	A VR3 (L) A VR4 (R) B VR5 (L) B VR6 (R)	4.4mV	(a)

## ADJUSTMENT POINTS



## VOLTAGE TABLES

AUDIO UNIT  
(X09-340X-XX)

## IC1

1~4	0V
5	5.2V
6	0V
7	-5.3V
8	—
9~12	0V

## IC2

1~3	0V
4	-5.3V
5~7	0V
8	5.2V

## IC3

1~4	0V
5	5.2V
6	0V
7	-5.3V
8	—
9~12	0V

## Q5

E	-17.5V
C	-0.2V
B	-17.0V

## Q9

E	-17.5V
C	-1.2V
B	-17.0V

## Q13

E	0.7V
C	-17.0V
B	0.1V

## Q15

E	0.7V
C	-17.0V
B	0V

## Q21

E	-1.2V
C	1.2V
B	-0.6V

## Q25

E	0.6V
C	14.4V
B	1.2V

## Q29

E	-0.6V
C	-18.2V
B	-1.2V

## Q33

E	6V
C	14.4V
B	0.6V

## Q37

E	0V
C	-18.2V
B	-0.6V

## Q50

E	0.3V
C	14.4V
B	-4.1V

## Q51

E	0.3V
C	14.4V
B	-4.1V

## Q52

E	0V
C	14.4V
B	0.3V

## Q53

E	0V
C	14.4V
B	0.3V

SUB CIRCUIT UNIT  
(X13-6850-10)

## IC4

1	2.2V
2	3.3V
3	0.1V
4	0.6V
5	1.7V
6	3.8V
7	0.1V
8	11.3V
9, 10	3.7V
11	11.3V
12	14.4V
13~15	5.0V
16	0V

## Q45

E	5.2V
C	—
B	5.2V

## Q46

E	10.2V
C	14.4V
B	10.9V

## Q47

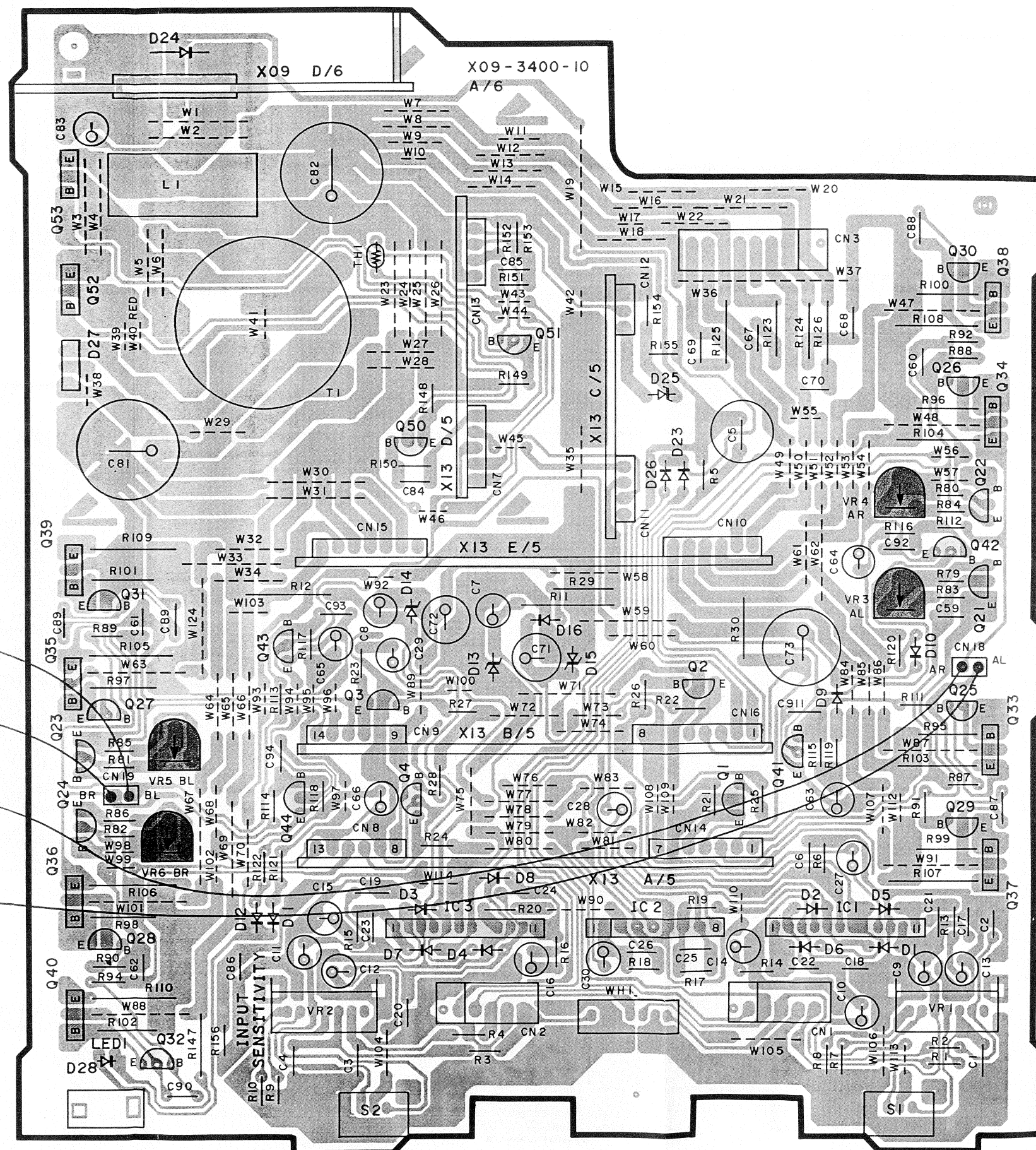
E	0V
C	10.7V
B	0.2V

## Q48

E	14.4V
C	14.4V
B	13.5V

## Q49

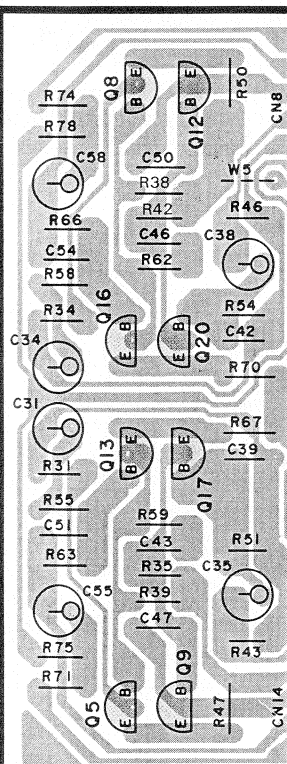
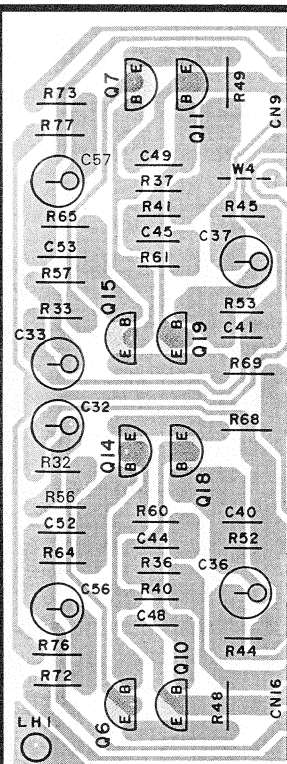
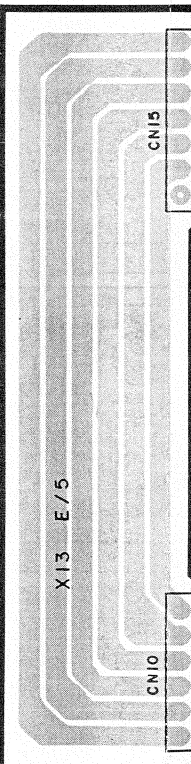
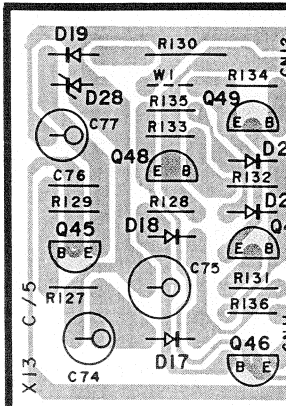
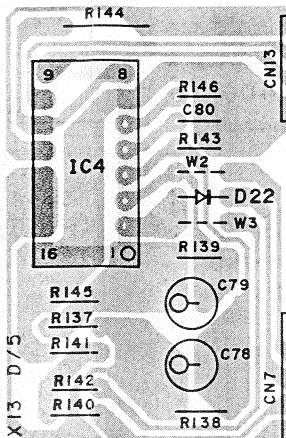
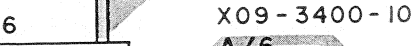
E	0V
C	0V
B	0.7V





## N

**SUB-CIRCUIT UNIT (X13-6850-10)**



## Errata

The part of the PC board of the unit with a Serial No. 10700000 and before is not correct. Correct as follows.

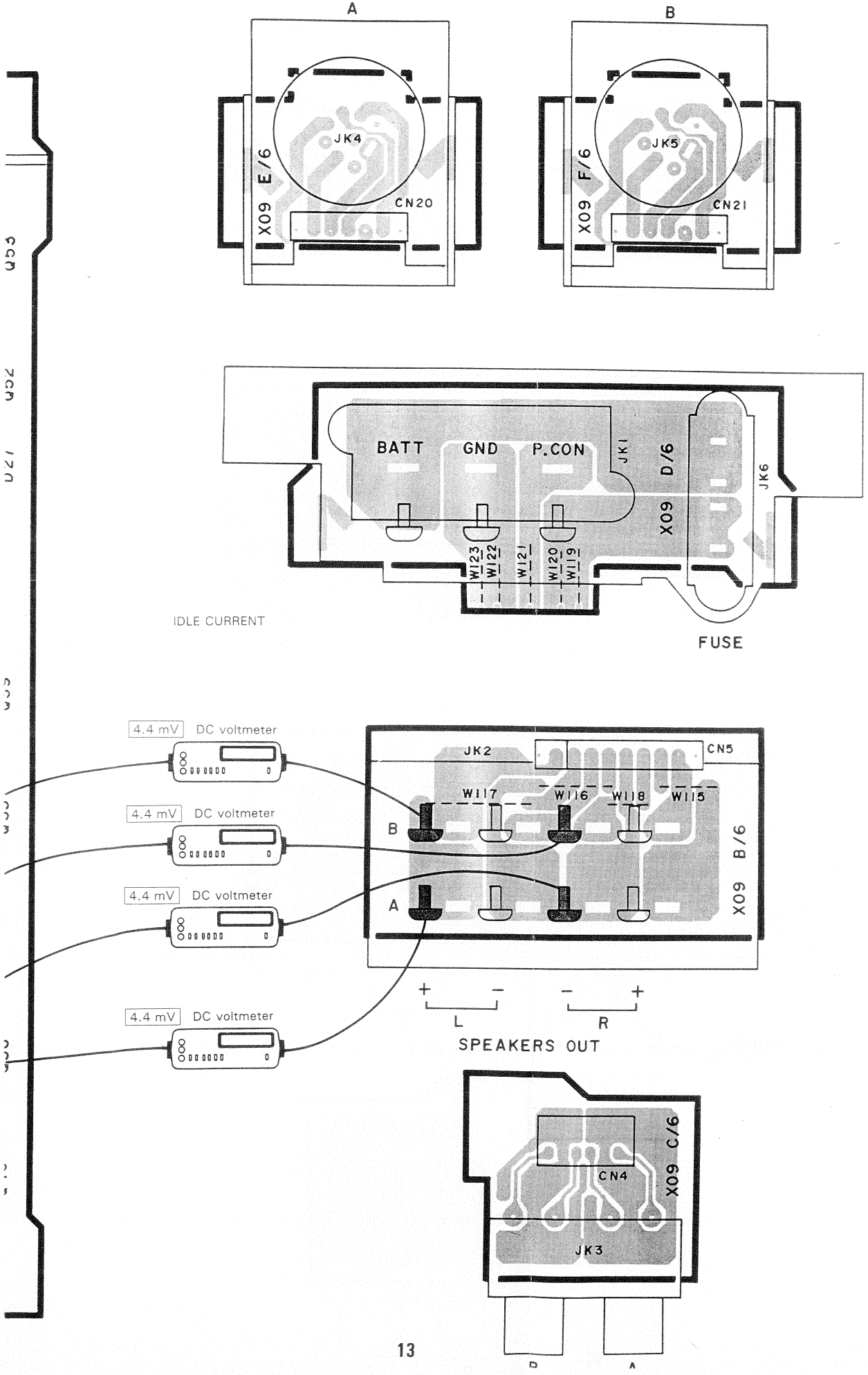
X13-685 (A/5)	X13-685 (B/5)	X09-340
$\begin{array}{cc} \times & \bigcirc \\ R42 \rightarrow R38 \\ R38 \rightarrow R42 \end{array}$	$\begin{array}{cc} \times & \bigcirc \\ R56 \rightarrow R32 \\ R32 \rightarrow R56 \\ C87 \rightarrow C57 \end{array}$	$\begin{array}{cc} \times & \bigcirc \\ D5 \rightarrow D9 \end{array}$

Refer to the schematic diagram for the values of resistors and capacitors.

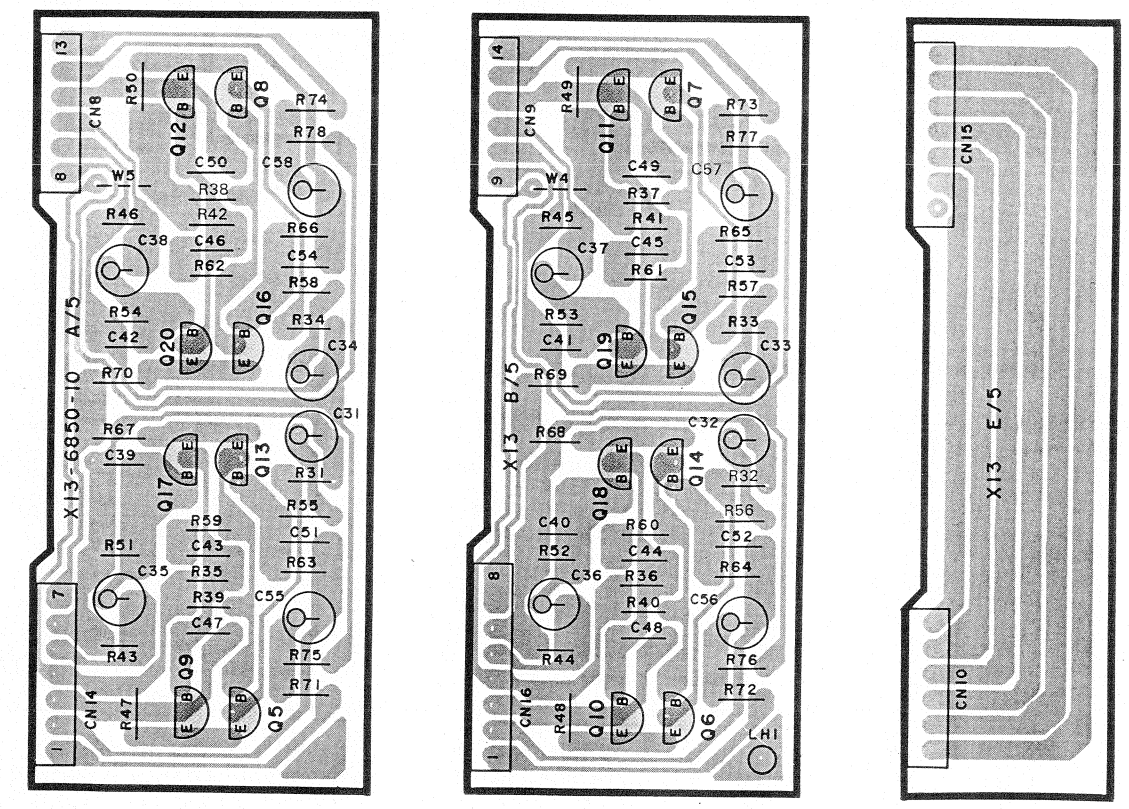
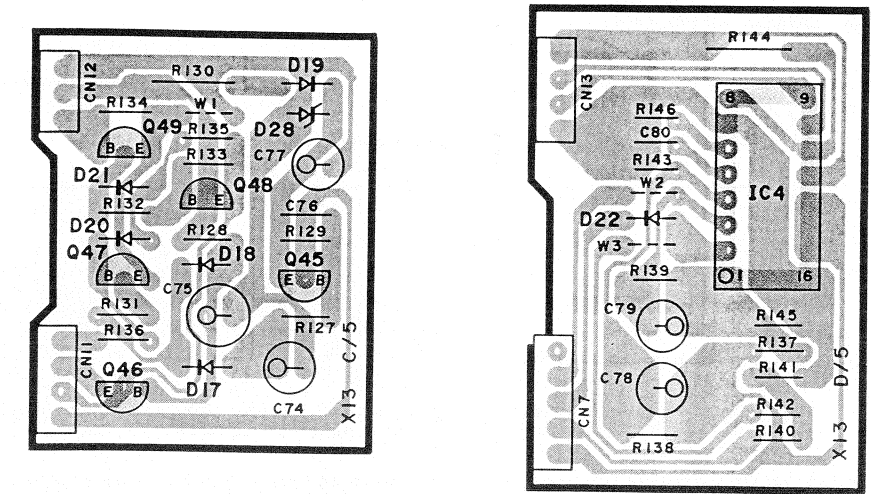








SUB-CIRCUIT UNIT (X13-6850-10)



### Errata

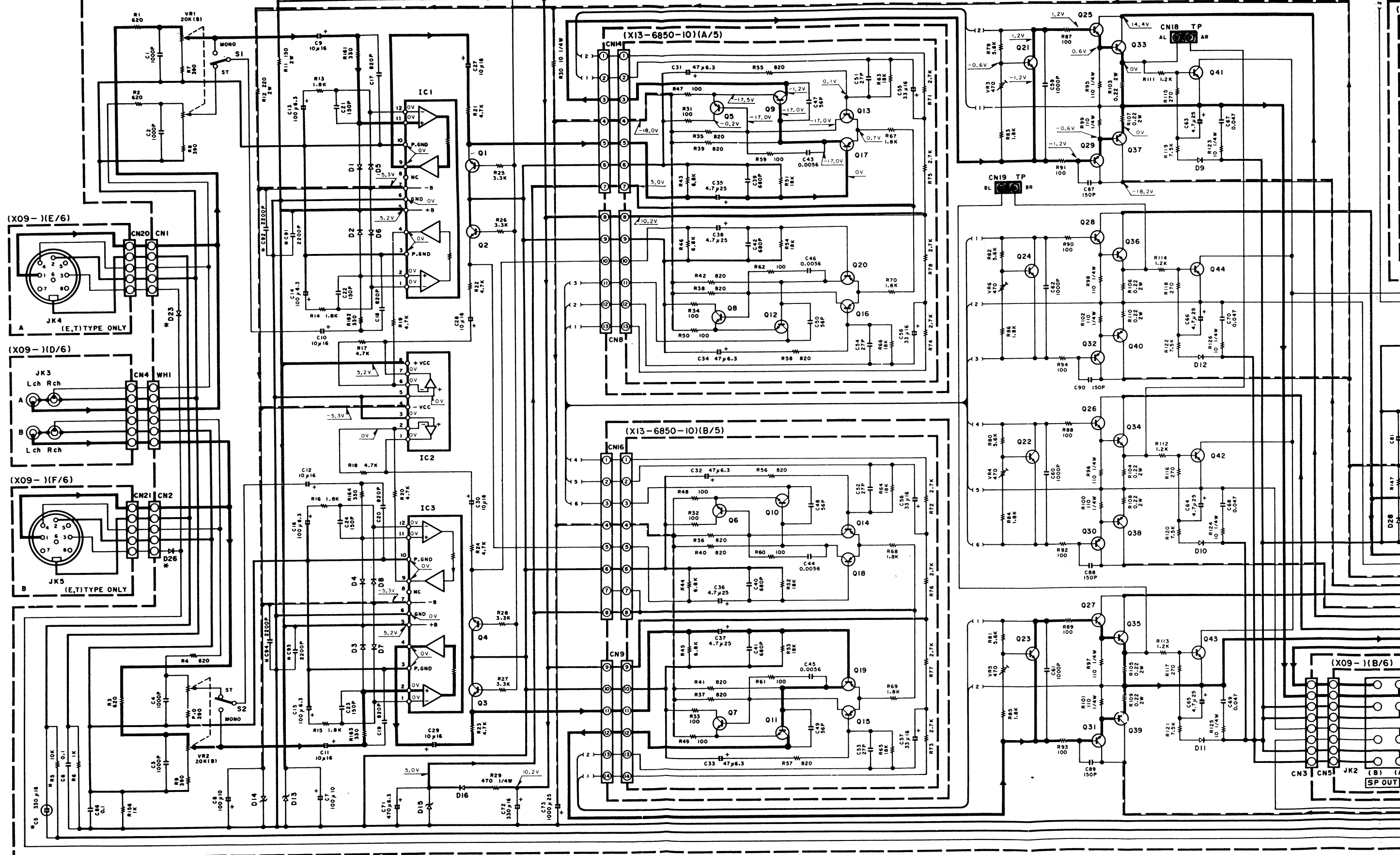
The part of the PC board of the unit with a Serial No. 10700000 and before is not correct. Correct as follows.

X13-685 (A/5)	X13-685 (B/5)	X09-340
X	O	X
R42 → R38	R56 → R32	D5 → D9
R38 → R42	R32 → R56	
	C87 → C57	

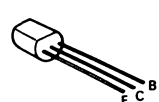
Refer to the schematic diagram for the values of resistors and capacitors.



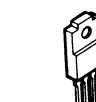
# AUDIO UNIT (X09-340X-XX) (A/6)



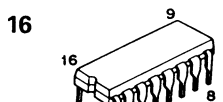
\* (E,T) TYPE ONLY



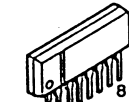
2SA1534A  
2SA733 (A)  
2SC3940A



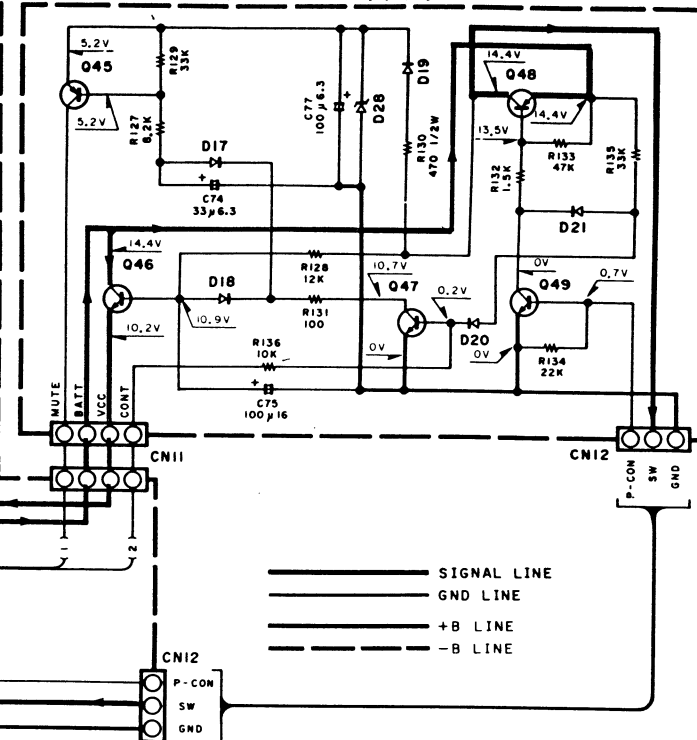
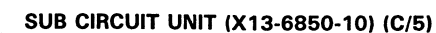
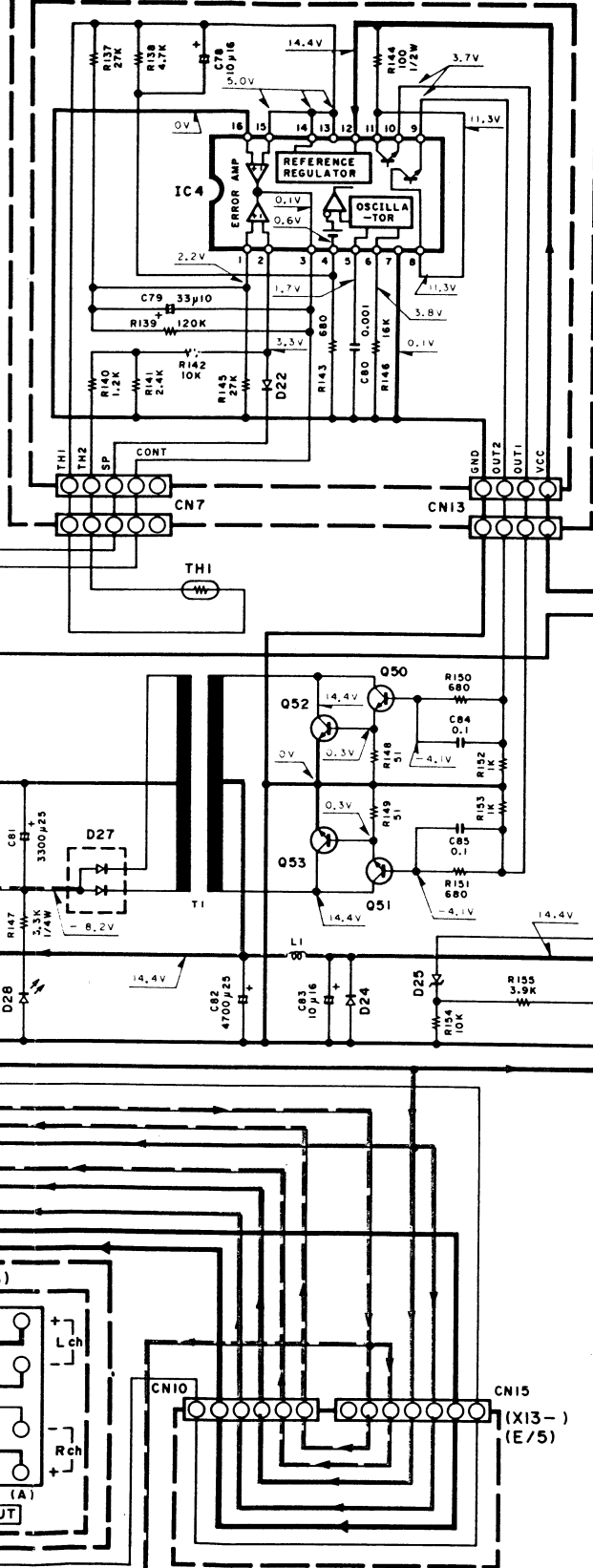
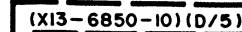
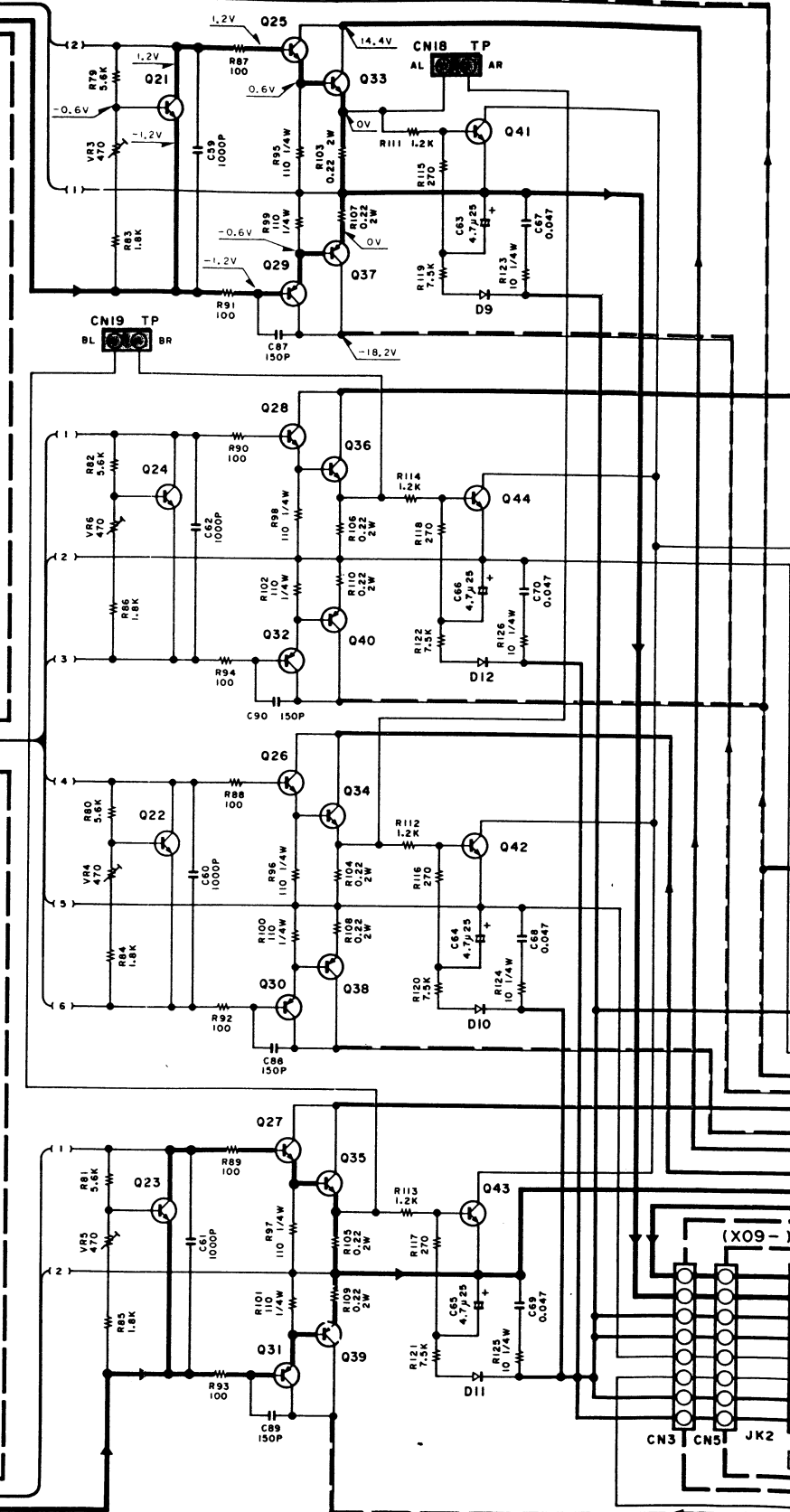
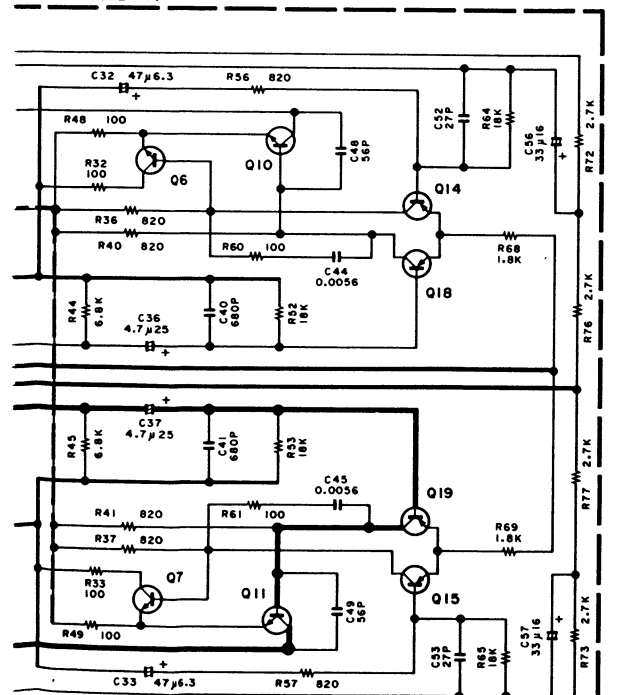
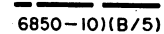
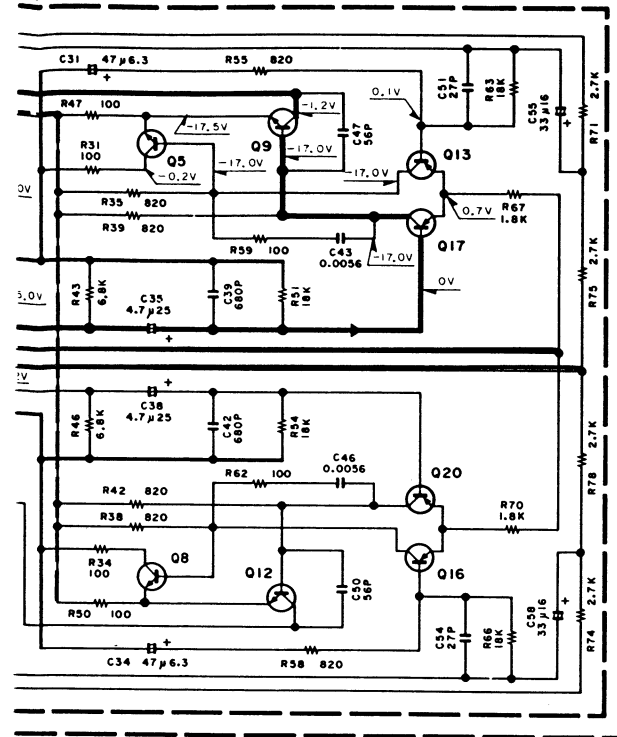
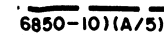
2SA1488\*B  
2SC3951\*R




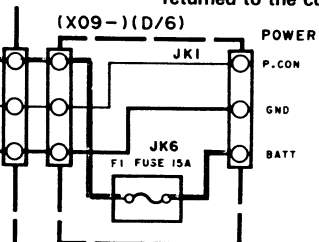
UPC494C



NJM4565L



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



- ```

IC1,3      : KKN02
IC2        : NJM4565L
IC4        : µPC494C

Q1~12,21~24,      : 2SC945(A)(Q,P)
41~44,47,49

Q13~20,45         : 2SA733(A)(Q,P)
Q25~28,46,50,51  : 2SC3940A(R,S)
Q29~32,48         : 2SA1534A(R,S)
Q33~36            : 2SC3851
Q37~40            : 2SA1488
Q52,53           : 2SC4064*B

D1~12,16~22      : 1SS176
D13,15,25,28     : RD5.1JS(B2)
D14              : RD8.2JS(B2)
D23,26           : ERA15-O1
D24              : RM10Z
D27              : FMU12R
D28              : SEL2010
THI              : PTH59F048B222TS

```

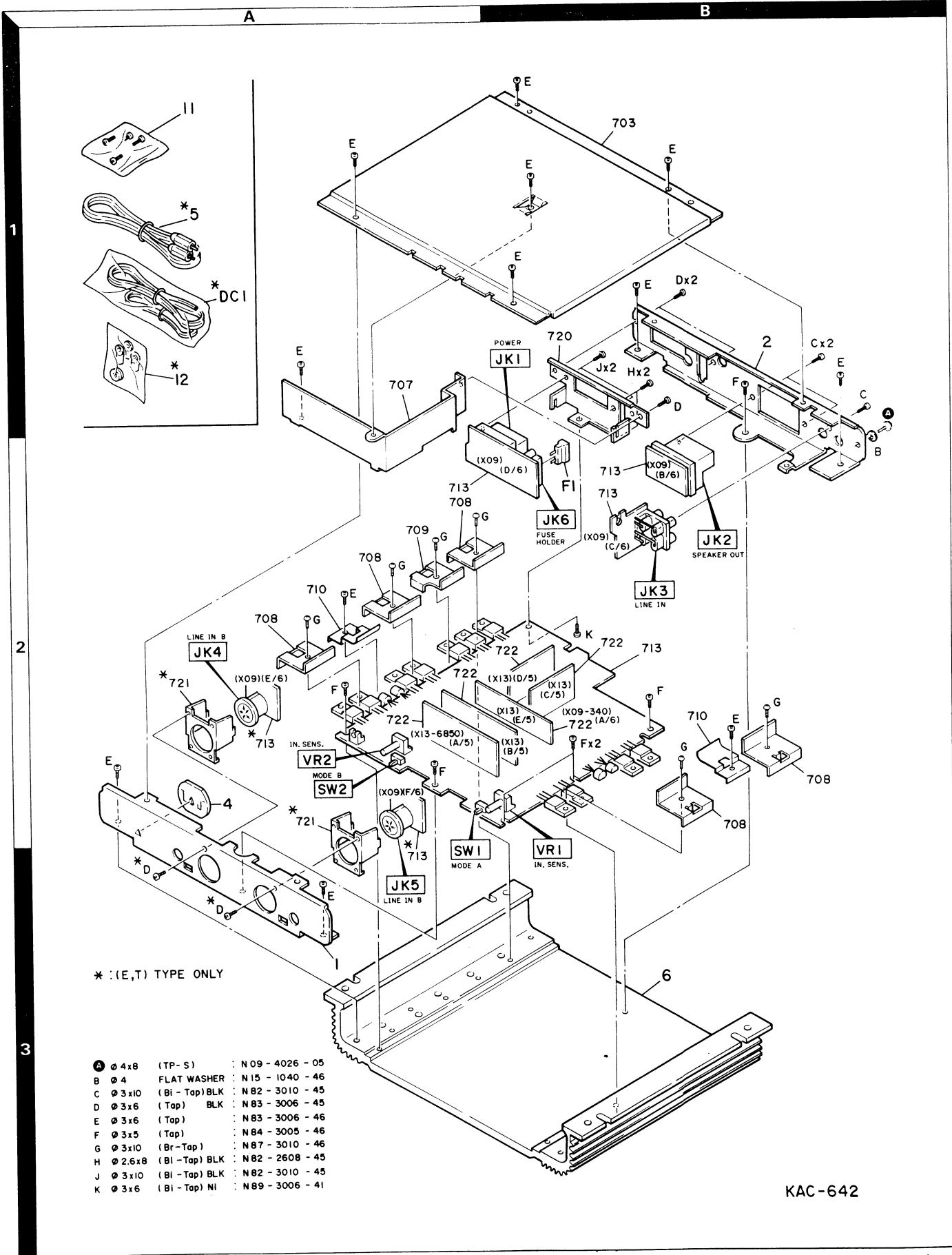
KAC-642 (K)

**KAC-642**  
KENWOOD

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Y08-4400-10

EXPLODED VIEW



PARTS LIST

× New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

| Ref. No.<br>参照番号                           | Address<br>位置 | New<br>Parts<br>新 | Parts No.<br>部品番号 | Description<br>部品名 / 規格       | Desti-<br>nation<br>仕向 | Re-<br>marks<br>備考 |
|--------------------------------------------|---------------|-------------------|-------------------|-------------------------------|------------------------|--------------------|
| KAC-642                                    |               |                   |                   |                               |                        |                    |
| 1                                          | 2A            | *                 | A20-7675-03       | PANEL                         | K                      |                    |
| 1                                          | 2A            | *                 | A20-7680-03       | PANEL                         | ET                     |                    |
| 2                                          | 1B            | *                 | A23-5040-13       | REAR PANEL                    |                        |                    |
| 4                                          | 2A            |                   | B19-0850-04       | LIGHTING BOARD                |                        |                    |
| -                                          |               |                   | B46-0100-20       | WARRANTY CARD                 | K                      |                    |
| -                                          |               | *                 | B64-0098-00       | INSTRUCTION MANUAL            | ET                     |                    |
| -                                          |               | *                 | B64-0099-00       | INSTRUCTION MANUAL            |                        |                    |
| 5                                          | 1A            |                   | E30-3883-05       | AUDIO CORD                    | ET                     |                    |
| DC1                                        |               | *                 | E30-3672-05       | DC CORD ASSY                  | ET                     |                    |
| 6                                          | 3A, 3B        | *                 | F01-1373-12       | HEAT SINK                     |                        |                    |
| F1                                         | 2B            |                   | F05-1537-05       | FUSE (15A)                    |                        |                    |
| -                                          |               | *                 | H01-9270-04       | ITEM CARTON CASE              |                        |                    |
| -                                          |               | *                 | H03-3314-04       | OUTER CARTON CASE             |                        |                    |
| -                                          |               | *                 | H10-4379-03       | POLYSTYRENE FOAMED FIXTURE    |                        |                    |
| -                                          |               |                   | H25-0336-04       | PROTECTION BAG (170X250X0.03) |                        |                    |
| -                                          |               |                   | H25-0342-04       | PROTECTION BAG (350X350X0.03) |                        |                    |
| 11                                         | 1A            |                   | N99-1557-05       | SCREW SET                     |                        |                    |
| A                                          | 2B            |                   | N09-4026-05       | TAPPING SCREW (4X8, TP, S)    |                        |                    |
| B                                          | 2B            |                   | N15-1040-46       | FLAT WASHER (4)               |                        |                    |
| C                                          | 1B            |                   | N82-3010-45       | BINDING HEAD TAPTITE SCREW    |                        |                    |
| D                                          | 1B            |                   | N83-3006-45       | PAN HEAD TAPTITE SCREW        |                        |                    |
| E                                          | 2A, 2B        |                   | N83-3006-46       | PAN HEAD TAPTITE SCREW        |                        |                    |
| F                                          | 2A, 2B        | *                 | N84-3005-46       | PAN HEAD TAPTITE SCREW        |                        |                    |
| G                                          | 2A, 2B        |                   | N87-3010-46       | BRAZIER HEAD TAPTITE SCREW    |                        |                    |
| 12                                         | 1A            |                   | W01-0701-05       | ACCESSORY                     | ET                     |                    |
| AUDIO UNIT (X09-340X-XX) 0-10: K, 2-71: ET |               |                   |                   |                               |                        |                    |
| D28                                        |               |                   | B30-1342-05       | LED                           |                        |                    |
| C1 -4                                      |               |                   | CK45FB1H102K      | CERAMIC 1000PF                | K                      |                    |
| C5                                         |               |                   | C90-2576-05       | ELECTRO 330UF                 | 16WV                   | ET                 |
| C6                                         |               |                   | CF92FV1H104J      | MF 0.10UF                     | J                      |                    |
| C7 ,8                                      |               |                   | CE04DW1A101M      | ELECTRO 100UF                 | 10WV                   |                    |
| C9 -12                                     |               |                   | CE04DW1C100M      | ELECTRO 10UF                  | 16WV                   |                    |
| C13 -16                                    |               |                   | CE04DW0J101M      | ELECTRO 100UF                 | 6.3WV                  |                    |
| C17 -20                                    |               |                   | CK45FB1H821K      | CERAMIC 820PF                 | K                      |                    |
| C21 -24                                    |               |                   | CC45FSL1H151J     | CERAMIC 150PF                 | J                      |                    |
| C27 -30                                    |               |                   | CE04DW1C100M      | ELECTRO 10UF                  | 16WV                   |                    |
| C59 -62                                    |               |                   | CK45FB1H102K      | CERAMIC 1000PF                | K                      |                    |
| C63 -66                                    |               |                   | CE04DW1E4R7M      | ELECTRO 4.7UF                 | 25WV                   |                    |
| C67 -70                                    |               |                   | CF92FV1H473J      | MF 0.047UF                    | J                      |                    |
| C71                                        |               |                   | CE04DW1A471M      | ELECTRO 470UF                 | 10WV                   |                    |
| C72                                        |               |                   | CE04DW1C331M      | ELECTRO 330UF                 | 16WV                   |                    |
| C73                                        |               |                   | CE04DW1E102M      | ELECTRO 1000UF                | 25WV                   |                    |
| C81                                        |               |                   | C90-2567-05       | ELECTRO 2200UF                | 25WV                   |                    |
| C82                                        |               |                   | C90-1633-05       | ELECTRO 4700UF                | 16WV                   |                    |
| C83                                        |               |                   | CE04DW1C100M      | ELECTRO 10UF                  | 16WV                   |                    |
| C84 -86                                    |               |                   | CF92FV1H104J      | MF 0.10UF                     | J                      |                    |
| C87 -90                                    |               |                   | CC45FSL1H151J     | CERAMIC 150PF                 | J                      |                    |
| C91 -94                                    |               |                   | CK45FB1H222K      | CERAMIC 2200PF                | K                      | ET                 |
| JK1                                        | 2B            | *                 | E70-0803-15       | SCREW TERMINAL BOARD          |                        |                    |

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KAC-642 KAC-642

PARTS LIST

t Parts No. are not supplied.  
non mentionnes dans le Parts No. ne sont pas fournis.  
rts No. werden nicht geliefert.

| Address                                    | New Parts | Parts No.     | Description                   | Destination | Remarks |
|--------------------------------------------|-----------|---------------|-------------------------------|-------------|---------|
| 位置                                         | 新         | 部品番号          | 部品名 / 規格                      | 仕向          | 備考      |
| KAC-642                                    |           |               |                               |             |         |
| 2A                                         | *         | A20-7675-03   | PANEL                         | K           |         |
| 2A                                         | *         | A20-7680-03   | PANEL                         | ET          |         |
| 1B                                         | *         | A23-5040-13   | REAR PANEL                    |             |         |
| 2A                                         |           | B19-0850-04   | LIGHTING BOARD                |             |         |
|                                            |           | B46-0100-20   | WARRANTY CARD                 |             |         |
|                                            | *         | B64-0098-00   | INSTRUCTION MANUAL            | K           |         |
|                                            | *         | B64-0099-00   | INSTRUCTION MANUAL            | ET          |         |
| 1A                                         | *         | E30-3883-05   | AUDIO CORD                    | ET          |         |
|                                            | *         | E30-3672-05   | DC CORD ASSY                  | ET          |         |
| 3A, 3B                                     | *         | F01-1373-12   | HEAT SINK                     |             |         |
| 2B                                         |           | F05-1537-05   | FUSE (15A)                    |             |         |
|                                            | *         | H01-9270-04   | ITEM CARTON CASE              |             |         |
|                                            | *         | H03-3314-04   | OUTER CARTON CASE             |             |         |
|                                            | *         | H10-4379-03   | POLYSTYRENE FOAMED FIXTURE    |             |         |
|                                            |           | H25-0336-04   | PROTECTION BAG (170X250X0.03) |             |         |
|                                            |           | H25-0342-04   | PROTECTION BAG (350X350X0.03) |             |         |
| 1A                                         |           | N99-1557-05   | SCREW SET                     |             |         |
| 2B                                         |           | N09-4026-05   | TAPPING SCREW (4X8,TP,S)      |             |         |
| 2B                                         |           | N15-1040-46   | FLAT WASHER (4)               |             |         |
| 1B                                         |           | N82-3010-45   | BINDIG HEAD TAPTITE SCREW     |             |         |
| 1B                                         |           | N83-3006-45   | PAN HEAD TAPTITE SCREW        |             |         |
| 2A, 2B                                     |           | N83-3006-46   | PAN HEAD TAPTITE SCREW        |             |         |
| 2A, 2B                                     | *         | N84-3005-46   | PAN HEAD TAPTITE SCREW        |             |         |
| 2A, 2B                                     |           | N87-3010-46   | BRAZIER HEAD TAPTITE SCREW    |             |         |
| 1A                                         |           | W01-0701-05   | ACCESSORY                     | ET          |         |
| AUDIO UNIT (X09-340X-XX) 0-10: K, 2-71: ET |           |               |                               |             |         |
|                                            |           | B30-1342-05   | LED                           |             |         |
|                                            |           | CK45FB1H102K  | CERAMIC 1000PF K              |             |         |
|                                            |           | C90-2576-05   | ELECTRO 330UF 16WV            | ET          |         |
|                                            |           | CF92FV1H104J  | MF 0.10UF J                   |             |         |
|                                            |           | CE04DW1A101M  | ELECTRO 100UF 10WV            |             |         |
|                                            |           | CE04DW1C100M  | ELECTRO 10UF 16WV             |             |         |
|                                            |           | CE04DW0J101M  | ELECTRO 100UF 6.3WV           |             |         |
|                                            |           | CK45FB1H821K  | CERAMIC 820PF K               |             |         |
|                                            |           | CC45FSL1H151J | CERAMIC 150PF J               |             |         |
|                                            |           | CE04DW1C100M  | ELECTRO 10UF 16WV             |             |         |
|                                            |           | CK45FB1H102K  | CERAMIC 1000PF K              |             |         |
|                                            |           | CE04DW1E4R7M  | ELECTRO 4.7UF 25WV            |             |         |
|                                            |           | CF92FV1H473J  | MF 0.047UF J                  |             |         |
|                                            |           | CE04DW1A471M  | ELECTRO 470UF 10WV            |             |         |
|                                            |           | CE04DW1C331M  | ELECTRO 330UF 16WV            |             |         |
|                                            |           | CE04DW1E102M  | ELECTRO 1000UF 25WV           |             |         |
|                                            |           | C90-2567-05   | ELECTRO 2200UF 25WV           |             |         |
|                                            |           | C90-1633-05   | ELECTRO 4700UF 16WV           |             |         |
|                                            |           | CE04DW1C100M  | ELECTRO 10UF 16WV             |             |         |
|                                            |           | CF92FV1H104J  | MF 0.10UF J                   |             |         |
|                                            |           | CC45FSL1H151J | CERAMIC 150PF J               |             |         |
|                                            |           | CK45FB1H222K  | CERAMIC 2200PF K              | ET          |         |
| 2B                                         | *         | E70-0803-15   | SCREW TERMINAL BOARD          |             |         |

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PARTS LIST

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| Ref. No.                       | Address | New Parts | Parts No.       | Description                | Destination | Remarks |
|--------------------------------|---------|-----------|-----------------|----------------------------|-------------|---------|
| 参照番号                           | 位置      | 新         | 部品番号            | 部品名 / 規格                   | 仕向          | 備考      |
| JK2                            | 2B      | *         | E70-0802-05     | SCREW TERMINAL BOARD       |             |         |
| JK3                            | 2B      | *         | E63-0804-05     | PHONE JACK                 | ET          |         |
| JK4 ,5                         | 2A      |           | E06-0823-05     | REC/PLAY JACK              |             |         |
| JK6                            | 2B      |           | J13-0071-05     | FUSE HOLDER                |             |         |
| L1                             |         | *         | L33-0941-05     | CHOKO COIL                 |             |         |
| T1                             |         | *         | L19-0515-05     | TRANSFORMER FOR CONVERTER  |             |         |
| H1                             | 1B      | *         | N82-2608-45     | BINDIG HEAD TAPTITE SCREW  |             |         |
| H2                             | 1B      |           | N82-3010-45     | BINDIG HEAD TAPTITE SCREW  |             |         |
| K                              | 2B      |           | N89-3006-41     | BINDING HEAD TAPTITE SCREW |             |         |
| R11                            |         |           | RS14KB3D151J    | FL-PROOF RS 150 J 2W       |             |         |
| R12                            |         |           | RS14KB3D221J    | FL-PROOF RS 220 J 2W       |             |         |
| R30                            |         |           | RD14DB2H100J    | SMALL-RD 10 J 1/2W         |             |         |
| R103-110                       |         |           | RS14KB3DR22J    | FL-PROOF RS 0.22 J 2W      |             |         |
| R147                           |         | *         | RD14DB2H332J    | SMALL-RD 3.3K J 1/2W       |             |         |
| VR1 ,2                         |         | *         | R10-3692-05     | POTENTIOMETER(20K)         |             |         |
| VR3 -6                         |         |           | R12-0094-05     | TRIMMING POT.(470)         |             |         |
| S1 ,2                          |         |           | S31-2075-05     | SLIDE SWITCH               |             |         |
| D1 -12                         |         |           | 1SS176          | DIODE                      |             |         |
| D13                            |         |           | RD5.1JS(B2)     | ZENER DIODE                |             |         |
| D14                            |         |           | RD8.2JS(B2)     | ZENER DIODE                |             |         |
| D15                            |         |           | RD5.1JS(B2)     | ZENER DIODE                |             |         |
| D16                            |         |           | 1SS176          | DIODE                      |             |         |
| D23                            |         |           | ERA15-01        | DIODE                      | ET          |         |
| D24                            |         |           | RM10Z           | DIODE                      |             |         |
| D25                            |         |           | RD5.1JS(B2)     | ZENER DIODE                |             |         |
| D26                            |         |           | ERA15-01        | DIODE                      | ET          |         |
| D27                            |         |           | FMU12R          | DIODE                      |             |         |
| IC1                            |         |           | KKN02           | IC(ISOLATION AMPLIFIER)    |             |         |
| IC2                            |         |           | NJM4565L        | IC                         |             |         |
| IC3                            |         |           | KKN02           | IC(ISOLATION AMPLIFIER)    |             |         |
| Q1 -4                          |         |           | 2SC945(A)(Q,P)  | TRANSISTOR                 |             |         |
| Q21 -24                        |         |           | 2SC945(A)(Q,P)  | TRANSISTOR                 |             |         |
| Q25 -28                        |         |           | 2SC3940A(R,S)   | TRANSISTOR                 |             |         |
| Q29 -32                        |         |           | 2SA1534A(R,S)   | TRANSISTOR                 |             |         |
| Q33 -36                        |         | *         | 2SC3851*B       | TRANSISTOR                 |             |         |
| Q37 -40                        |         | *         | 2SA1488*B       | TRANSISTOR                 |             |         |
| Q41 -44                        |         |           | 2SC945(A)(Q,P)  | TRANSISTOR                 |             |         |
| Q50 ,51                        |         |           | 2SC3940A(R,S)   | TRANSISTOR                 |             |         |
| Q52 ,53                        |         | *         | 2SC4064*B       | TRANSISTOR                 |             |         |
| TH1                            |         |           | PTH59F04BB222TS | POSITIVE RESISTOR          |             |         |
| SUB-CIRCUIT UNIT (X13-6850-10) |         |           |                 |                            |             |         |
| C31 -34                        |         |           | CE04DW0J470M    | ELECTRO 47UF 6.3WV         |             |         |
| C35 -38                        |         |           | CE04DW1E4R7M    | ELECTRO 4.7UF 25WV         |             |         |
| C39 -42                        |         |           | CK45FB1H681K    | CERAMIC 680PF K            |             |         |
| C43 -46                        |         |           | CF92FV1H562J    | MF 5600PF J                |             |         |
| C47 -54                        |         |           | CC45FSL1H270J   | CERAMIC 27PF J             |             |         |
| C55 -58                        |         |           | CE04DW1C330M    | ELECTRO 33UF 16WV          |             |         |
| C74                            |         |           | CE04DW1A330M    | ELECTRO 33UF 10WV          |             |         |
| C75                            |         |           | CE04DW1C101M    | ELECTRO 100UF 16WV         |             |         |
| C77                            |         |           | CE04DW1A101M    | ELECTRO 100UF 10WV         |             |         |
| C78                            |         |           | CE04DW1C100M    | ELECTRO 10UF 16WV          |             |         |

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## PARTS LIST

× New Parts

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| Ref. No.<br>参照番号                | Address<br>位置 | New<br>Parts<br>新 | Parts No.<br>部品番号                                                                    | Description<br>部品名 / 規格                                            | Desti-<br>nation<br>仕向 | Re-<br>marks<br>備考 |
|---------------------------------|---------------|-------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------|--------------------|
| C79<br>C80                      |               |                   | CE04DW1A330M<br>CK45FB1H102K                                                         | ELECTRO 33UF 10WV<br>CERAMIC 1000PF K                              |                        |                    |
| D17 -22<br>D28<br>IC4           |               |                   | 1SS176<br>RD5.1JS(B2)<br>UPC494C                                                     | DIODE<br>ZENER DIODE<br>IC(SWITCHING REGULATOR)                    |                        |                    |
| Q5 -12<br>Q13 -20               |               |                   | 2SC945(A)(Q,P)<br>2SA733(A)(Q,P)                                                     | TRANSISTOR<br>TRANSISTOR                                           |                        |                    |
| Q45<br>Q46<br>Q47<br>Q48<br>Q49 |               |                   | 2SA733(A)(Q,P)<br>2SC3940A(R,S)<br>2SC945(A)(Q,P)<br>2SA1534A(R,S)<br>2SC945(A)(Q,P) | TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR |                        |                    |

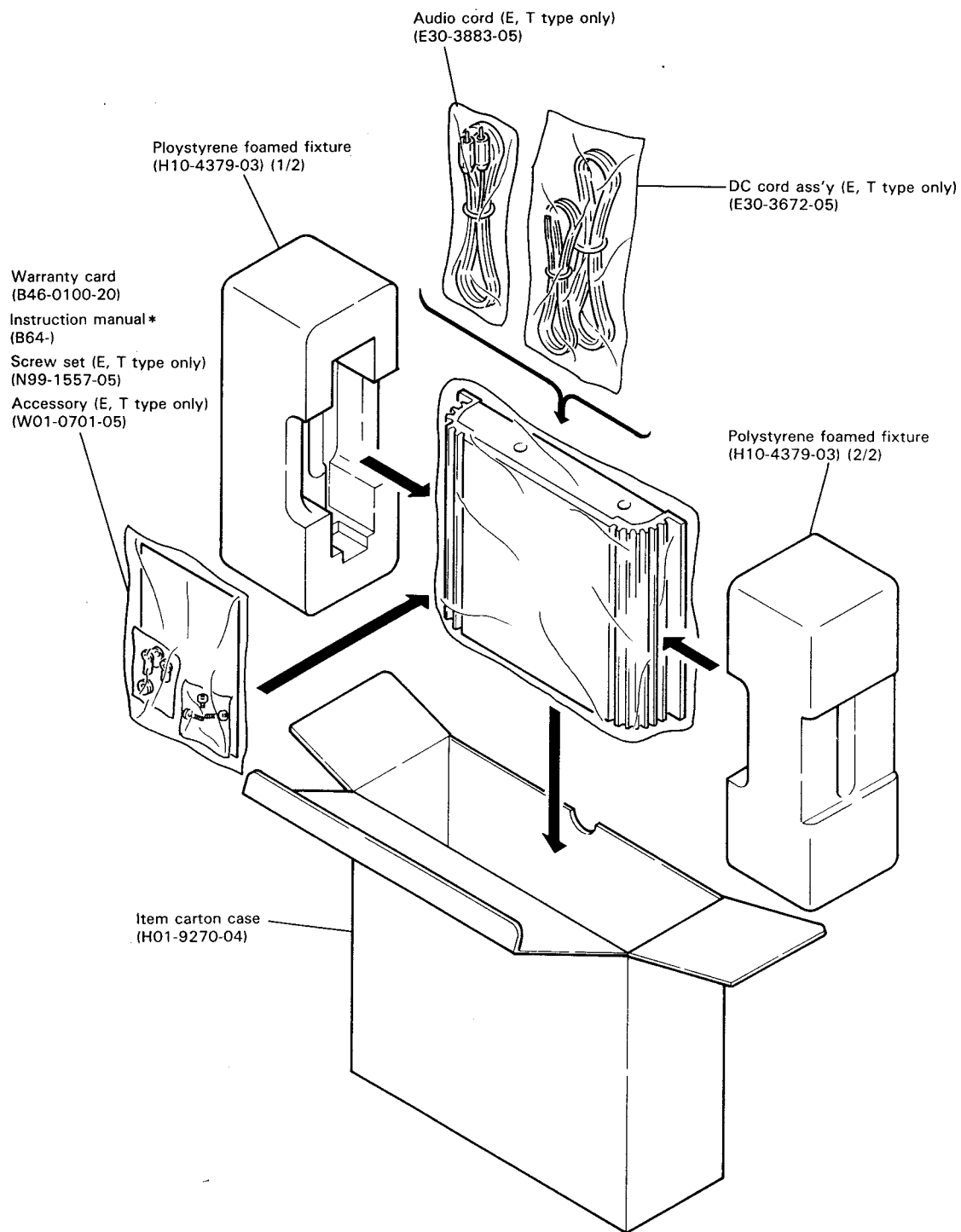
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## PACKING



\* Refer to parts list on page 19.

# SPECIFICATIONS

Specifications subject to change without notice.

## Audio Section

|                               |                                                           |
|-------------------------------|-----------------------------------------------------------|
| Max Power Output [4 Ω]        |                                                           |
| 4 Channel Mode .....          | 40 W × 4                                                  |
| 3 Channel Mode .....          | 40 W × 2 + 90 W                                           |
| 2 Channel Mode .....          | 90 W × 2                                                  |
| Rated Power Output [4 Ω]      |                                                           |
| 4 Channel Mode .....          | 16 W × 4 (20 Hz ~ 20 kHz, less than 0.08% THD)            |
| 3 Channel Mode .....          | 16 W × 2 (20 Hz ~ 20 kHz, 0.08%) + 45 W × 1 (1 kHz, 0.8%) |
| 2 Channel Mode .....          | 45 W × 2 (1 kHz, 0.8% THD)                                |
| Rated Power Output [2 Ω]      |                                                           |
| 4 Channel Mode .....          | 25 W × 4 (1 kHz, 0.8% THD)                                |
| Frequency Response .....      | 6 Hz ~ 65 kHz (−3 dB)                                     |
| Signal to Noise Ratio .....   | 100 dB                                                    |
| Sensitivity (MAX) .....       | 0.1 V (rated output)                                      |
| Sensitivity (MIN) .....       | 5.0 V (rated output)                                      |
| Input Impedance .....         | 10 kΩ                                                     |
| Damping Factor (100 Hz) ..... | More than 100                                             |

## General

|                                            |                                                     |
|--------------------------------------------|-----------------------------------------------------|
| Operating Voltage .....                    | 14.4 V (11 ~ 16 V allowable)                        |
| Current Consumption (1 kHz, 10% THD) ..... | 16 A                                                |
| Dimensions (W × H × D) .....               | 220 × 48 × 185 mm<br>(8-11/16 × 1-7/8 × 7-5/16 in.) |
| Weight .....                               | 2.1 kg (4.6 lb)                                     |

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

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